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FINAL REGULATORY EVALUATION

NHTSA-2001-8677-470

TREAD ACT
EARLY WARNING REPORTING SYSTEM
PART 579

Office of Regulatory Analysis and Evaluation
Plans and Policy
July 2002

Executive Summary

In October 2000, H.R. 5164 the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act was passed by the Congress, and enacted on November 1, 2000 (Pub. L. 106-414). It amends, among other things, 49 U.S.C. 30166 to add a new subsection (m), **Early warning reporting requirements.** The TREAD Act directs NHTSA to issue a final rule by June 30, 2002, requiring motor vehicle and motor vehicle equipment manufacturers to report claims data and other information that may assist in identifying defects related to motor vehicle safety in vehicles or equipment in the United States. The agency published a notice of proposed rulemaking on the early warning reporting requirements on December 21, 2001).

Alternatives

Three alternatives were analyzed:

Alternative 1 is the proposal in the NPRM

Alternative 2 is the final rule

Alternative 3 is the final rule minus the requirement for historical dealer reports

Details of the alternatives are in Chapter IV.

Benefits

The benefit of NHTSA receiving the early warning data is that NHTSA investigations will be opened sooner. The direct impact of opening investigations sooner is that recalls will be initiated earlier, defective vehicles and equipment will be taken off the roads sooner, and fewer injuries

and fatalities, and less property damage will occur. On average, it takes 36 to 45 months from the time the first consumer complains to a dealer of a problem and there is a NHTSA-influenced recall. With the early warning data, the agency estimates that the average NHTSA investigation will be opened 12 months sooner, shortening the time of the entire process by 12 months of more.

We expect that the increase in new information will result in an increase in investigations and recalls, both by the manufacturer voluntarily, and by NHTSA. The agency cannot quantify the benefits in terms of reduced fatalities, injuries, or property damage.

The agency estimates that total manufacturers' recall costs could be reduced by $9 million per year by stopping production of vehicles with defective parts that would be recalled in the future. This is based on having the average recall (manufacturer voluntary recall and NHTSA-influenced) occur three months earlier for a subset of vehicles, which are still in production when the recall occurs and for which some recalled vehicles are three or more years old, and assuming an average recall costs $100 per vehicle.

Costs

We estimate the total first year costs (including computer startup costs, three years of historical data, and the annual report for the first year) for the final rule will be about $70 million, and recurring annual costs will be about $1.72 million. Annual ongoing costs are the same for all three alternatives. First year costs are estimated to be about $87 million for Alternative 1, $70 million for Alternative 2 and $68 million for Alternative 3.

Net Costs

There are safety benefits associated with this final rule, however, we were unable to quantify them. There are start-up costs in the first year of the final rule of $70 million that are offset somewhat by economic benefits of $9 million per year. However, in the second and subsequent years, we estimate that benefits to the manufacturers of $9 million per year will outweigh the annual on-going costs of $1.72 million per year.

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I. INTRODUCTION

Congress enacted the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act in October 2000 (H.R. 5164). It was signed by the President on November 1, 2000 (Pub. L. 106-414). The TREAD Act's early warning provisions seek to ensure that the National Highway Traffic Safety Administration (NHTSA) receives appropriate information in a timely fashion, including manufacturer data on claims and notices related to deaths and injuries. It does so in part by amending 49 U.S.C. 30166 to add a new subsection (m).

Sections 30166(m)(3), (4), and (5) authorize NHTSA to require information to be reported, the handling and utilization of information reported, and periodic review and update of the final rule. The Secretary has delegated to the NHTSA Administrator the authority to carry out 49 U.S.C. Chapter 301 (49 CFR 501.2(a)). The TREAD Act provides for NHTSA to require manufacturers of motor vehicles and motor vehicle equipment to submit information that concerns claims and notices for deaths and injuries, property damage, communications to customers, incidents resulting in fatalities or serious injuries from possible defects in vehicles or equipment in the United States, or in identical or substantially similar vehicles or equipment in a foreign country, and other information that would assist NHTSA in identifying potential safety-related defects.

On January 22, 2001, we published an Advance Notice of Proposed Rulemaking (ANPRM) to initiate rulemaking, and to request comments on ways that we may implement the "early warning reporting requirements" of the TREAD Act, and how to best use this information and data to fulfill the statutory goal (66 FR 6532). On October 11, 2001, we issued a notice of

proposed rulemaking (NPRM) that would implement another provision of the TREAD Act, adding Section 30166(l) to Title 49, United States Code (66 FR 51907). Subsection l requires manufacturers to notify us of safety recalls and other campaigns that they conduct outside the United States, or are ordered by a foreign government to conduct abroad, on vehicles and equipment identical or substantially similar to those sold in the United States.

On December 21, 2001, we published a Notice of Proposed Rulemaking (NHTSA Docket 8677 Notice 2) that proposed a regulation that would implement the early warning reporting requirements of the TREAD Act. We also proposed amendments to NHTSA's general and tire recordkeeping regulations (49 CFR Parts 576 and 574) to assure that manufacturers retain information supporting the reports to NHTSA under the early warning rule. The comment period closed on February 4, 2002. The early warning final rule and the final rule pertaining to foreign defect campaigns, and current 49 CFR 573.8 will be 49 CFR 579.3(a)(2002).

A. Who is Covered. The TREAD Act requires information to be submitted by manufacturers of motor vehicles and motor vehicle equipment. We are dividing manufacturers into two groups. The first group comprises larger manufacturers or motor vehicles, and all manufacturers of child restraints and tires. Vehicle manufacturers will report separately on four categories of vehicles (if they produced, imported, or sold 500 or more motor vehicles in a category annually in the United States): light vehicles, medium-heavy vehicles and all buses, trailers, and motorcycles. Manufacturers will be required to report certain specified information about each incident involving a death that occurred in the United States and foreign countries that is identified in a claim against the manufacturer and injuries that occurred in the U.S.

reported in claims. Manufacturers will also report numbers of property damage, consumer complaints, warranty claims information, and field reports in the United States. Child restraint manufacturers will have to report on claims of deaths and injuries, consumer complaints and warranty claims (combined), and field reports. Tire manufacturers will have to report information on claims involving deaths and injuries in the U.S. only, and the number of property damage and warranty adjustments. Each of these manufacturers will also have to provide production information on a make/model/model year basis.

The second group of manufacturers will consist of all other manufacturers of motor vehicles and motor vehicle equipment (if they produced, imported, or sold in the United States fewer than 500 light vehicles, medium-heavy vehicles (including buses), motorcycles, or trailers annually, manufacturers of original motor vehicle equipment and manufacturers of replacement motor vehicle equipment other than child restraints and tires. Those manufacturers will report only information about incidents involving deaths identified in claims against the manufacturer.

All vehicle and equipment manufacturers will be required to provide copies of all documents (documents are defined as documents or documented phone calls) sent or made available to more than one dealer, distributor, or owner, in the United States with respect to consumer advisories, recalls, or activities involving the repair or replacement of vehicles or equipment.

B. What Information Must Be Submitted In general, larger manufacturers of motor vehicles (if they produces, imported, offered for sale, or sold 500 or more of the following

categories annually in the United States: light vehicles, medium-heavy vehicles and all buses, trailers, and motorcycles) and all manufacturers of child restraint systems and tires must report:

- *Deaths*. These manufacturers must report certain specified information about each incident involving a death that occurred in the United States that is identified in a claim (as defined) against and received by the manufacturer. They must also report information about each incident involving a death in the United States that is identified in a notice received by the manufacturer alleging or proving that the death was caused by a possible defect in the manufacturer's product. Finally, they must report on each incident involving a death occurring in a foreign county that is identified in a claim against and received by the manufacturer involving the manufacturer's product, or one that is identical or substantially similar to a product that the manufacturer has offered for sale in the United States.
- *Injuries*. These manufacturers must report certain specified information about each incident involving an injury that occurred in the United States that is identified in a claim against and received by the manufacturer or that is identified in a notice to the manufacturer which notice alleges or proves that the injury was caused by a possible defect in the manufacturer's product.
- *Property damage*. These manufacturers (other than child restraint system manufacturers) must report the numbers of claims for property damage that occurred in the United States that are related to alleged problems with certain specified components and systems, regardless of the amount of such claims.

- *Consumer complaints.* These manufacturers (other than tire manufacturers) must report the numbers of consumer complaints they receive that are related to problems with certain specified components and systems that occurred in the United States. Manufacturers of child restraint systems must report the combined number of such consumer complaints and warranty claims, as discussed below.
- *Warranty claims information.* These manufacturers must report the number of warranty claims (adjustments for tire manufacturers), including extended warranty and good will, they receive that are related to problems with certain specified components and systems that occurred in the United States. As noted above, manufacturers of child restraint systems must combine these with the number of reportable consumer complaints.
- *Field reports.* These manufacturers (other than tire manufacturers) must report the total number of field reports they receive from the manufacturer's employees and dealers, and from fleets, that are related to problems with certain specified components and systems that occurred in the United States. In addition, manufacturers must provide copies of field reports received from their employees and fleets, but are not required to provide copies of reports received from dealers.
- *Production.* These manufacturers must report the number of vehicles, child restraint systems, and tires, but make model, and model year, during the reporting period and the prior nine model years (four years for child restraint systems and tires).

Smaller volume manufacturers of these categories of vehicles, and equipment manufacturers other than tire and child restraint manufacturers must reports on the same information on deaths as discuss above.

In addition, all vehicle and equipment manufacturers in both groups must provide copies of all documents sent or made available to more than one dealer, distributor, owner, purchaser, lessor or lessee, in the United States with respect to customer satisfaction campaigns, consumer advisories, recalls, or other activities involving the repair or replacement of vehicles or equipment.

In addition, no later than the date that a manufacturer must submit its first reports under the final rule, each manufacturer will also submit, on a one-time basis, the numbers of property damage claims, consumer complaints, warranty claims, and field reports that it received in each calendar quarter from APRIL 1, 2000 to MARCH 31, 2003 for vehicles manufactured in model years 1994 through 2003, and for child restraint systems and tires manufactured on or after April 1, 1998. Each report shall include production data, as specified in paragraph (a) of §§579.21 through 579.26 of 49 CFR and shall identify the alleged system or component related to the claim, incident, and other information, as specified in paragraph (c) of §§579.21 through 579.26.

C. Vehicles and Equipment Covered: Substantially Similar Vehicles and Equipment in Foreign Countries. Section 30166(m)(3)(C) of the TREAD Act provides for manufacturers to report incidents involving fatalities or serious injuries that are alleged or proven to be caused by a possible defect "in a foreign country when the possible defect is in a motor vehicle or motor

vehicle equipment that is identical or substantially similar to a motor vehicle or motor vehicle equipment offered for sale in the United States." This is in addition to the duty to report claims and other information covered by Section 30166(m)(3)(A) that are "derived from foreign domestic sources."

D. Cut-off Dates. A manufacturer is required to notify NHTSA, owners, and dealers, if it or the agency determines that a vehicle contains a safety-related defect; however, it need not provide a remedy without charge if the determination is made more than 10 years after its first sale. There may be types of information otherwise covered by this rule that, due to the passage of time or other occurrence, need not be provided for safety purposes.

E. When Should Information and Documents Be Submitted. NHTSA requires that the information be reported quarterly. Copies of field reports are due within 30 days after the end of each month. Copies of other documents are due within 5 working days of the end of the month.

F. How Should the Information Be Reported. The information should be reported to NHTSA's early warning secure data repository website, which can be reached through a link on NHTSA's Internet website (www.nhtsa.dot.gov). The manufacturer must use the templates provided at the data repository website for submitting reports. For data files smaller than the size limit of the Internet e-mail server of the Department of Transportation, a manufacturer may submit a report as an attachment to an e-mail message to odi.ewr@nhtsa.dot.gov, using the same templates.

G. How NHTSA Might Handle and Utilize Early Warning Information Reported To It. Section 30166(m)(4)(A)(i) and (ii) require that our early warning rule specify how the information reported to us will be reviewed and used by us in identifying defects related to motor vehicle safety; and the systems and processes we will employ or establish to review and utilize this information. We will review the information to determine whether potentially problematic trends are developing in the vehicles, equipment items, components, and systems for which information has been provided.

H. Costs and Burdens. Section 30166(m)(4)(D) requires that the final rule shall not impose requirements unduly burdensome to a manufacturer of a motor vehicle or motor vehicle equipment, taking into account the manufacturer's cost of complying with such requirements and NHTSA's ability to use the information sought in a meaningful manner to assist in the identification of defects related to motor vehicle safety.

II. BACKGROUND

On August 9, 2000, Bridgestone/Firestone, Inc. (Firestone) announced that it would recall certain ATX, ATXII, and Wilderness AT tires that contained a defect related to sudden tread separation. On August 16, Firestone filed a formal defect report with NHTSA pursuant to 49 CFR part 573. The recall covered P235/75R15 size tires including all ATX and ATX II tires of that size, and all Wilderness AT tires of that size produced at Firestone's Decatur, Illinois, manufacturing plant. At the time, Firestone estimated that approximately 6.5 million of the 14.4 million tires covered by the recall were still in use throughout the world.

Between March 1990 and February 2000, NHTSA's consumer complaint database received approximately 46 complaints about Firestone ATX and Wilderness tires. Beginning in February 2000, we began to receive additional complaints on these tires. On May 2, 2000, NHTSA's Office of Defects Investigation (ODI) opened a defect investigation (Investigation No. PE00-020), after having received 44 additional reports since February 2000. Most of these complaints covered tires installed on Ford Explorer vehicles. None of the complaints covered tires in use outside the United States. The investigation covered over 47 million ATX and Wilderness tires, of various sizes, made in several plants.

Firestone recorded 348 personal injury claims, 78 deaths, 3,538 property damage claims, and was a defendant in 66 lawsuits related to the tires covered. It also received a number of requests for financial adjustments from consumers who were unhappy with their tires. We were not aware of these data until after we opened our investigation because Firestone was not required to

provide this information to us in the absence of a specific request, and did not voluntarily provide it.

Ford Motor Company (Ford) had previously taken several actions overseas to address safety problems related to Wilderness tires on Ford Explorer vehicles. In none of the instances did Ford or Firestone notify NHTSA of these actions. Although 49 U.S.C. 30166(f) as implemented by 49 CFR 573.8 would have required Ford to notify us of these actions if they had occurred in the United States, the statute and regulation did not require manufacturers to provide NHTSA with documents of communications about defects and noncompliance with respect to actions outside the United States.

Title 49, United States Code, Chapter 301-Motor Vehicle Safety, is the basic motor vehicle safety statute administered by NHTSA (the "Vehicle Safety Act"). Under 49 U.S.C. 30118(c)(1), a manufacturer of a motor vehicle or replacement equipment must notify NHTSA if the manufacturer "learns the vehicle or equipment contains a defect and decides in good faith that the defect relates to motor vehicle safety."

Prior to the TREAD Act, a manufacturer's automatic (i.e., not in response to NHTSA's information requests under which information is required as part of an investigation) reporting obligations under Section 30166 were established by 49 U.S.C. 30166(f), providing copies of communications about defects and noncompliance, as implemented by 49 CFR 573.8, Notices, bulletins, and other communications. However, the statute and regulations did not require

manufacturers to provide these documents with respect to actions occurring outside the United States.

In October 2000, H.R. 5164, the "Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act" was passed by the Congress. The TREAD Act was signed by the President on November 1, 2000, Pub. L. 106-414.

In H.R. Rep. 106-954, accompanying H.R. 5164, the TREAD Act, Congress noted that NHTSA did not have adequate, timely data about Firestone ATX and Wilderness tires. The TREAD Act seeks to ensure that NHTSA receives appropriate data from manufacturers of motor vehicles and motor vehicle equipment in a timely fashion, including that related to foreign recall actions and internal company data on claims related to defects. It does so by amending 49 U.S.C. 30166 to add a new subsection (m), Early warning reporting requirements.

An Advance Notice of Proposed Rulemaking (ANPRM) was published in the Federal Register on January 22, 2001 (66 FR 6532) requesting comments on ways that the NHTSA may implement the "early warning reporting requirements" of the TREAD Act. A Notice of Proposed Rulemaking was published on December 21, 2001 (66 FR 66190) proposing the regulation that would implement the "early warning reporting requirements." We also proposed amendments to our general and tire recordkeeping regulations (Parts 576 and 574) to assure that manufacturers retain the information that must be reported to us under the early warning rule.

III. ISSUES

Motor vehicle manufacturers and associated trade organizations who commented on the NPRM include Ford Motor Company (Ford), Porsche Cars North America, Inc., Association of International Automobile Manufacturers, Inc. (AIAM), Nissan North America, Inc. (Nissan), Volkswagen of America, Inc. (for itself, Volkswagen, AG and Audi AG), General Motors Corporation (GM), American Honda Motor Company (Honda), National Automobile Dealers Association (NADA), Alliance of Automobile Manufacturers (AAM).

A number of comments were received from motor vehicle equipment manufacturers, tire associations, and trade organizations. We also received comments from Public Citizen and Advocates for Highway and Auto Safety (Advocates).

Following are comments on costs and burdens from the NPRM.

Rubber Manufacturers Association urges NHTSA to postpone the requirement to report warranty adjustment, property damage claims, and injuries for all tires other than passenger and light truck tires until at least one year after the effective date of the present rulemaking.

Public Citizen suggested the agency make the following changes in the final rule:
Death or injury should trigger a reporting responsibility regardless of component or system category. Basic information regarding defect lawsuits should be required. Oral communications must be included. Remedy failures should be reported. Replacement parts should be reported. Smaller manufacturers should report injuries.

In an appendix, Dr. Carl Nash provided some suggestions for methods for deriving quantifiable benefits. Dr. Nash characterized the benefits as:

1) Likely to temporarily increase the number of defect recalls by bringing more defects to the notice of the company or NHTSA.
1) It will encourage manufacturers to improve overall quality control, including design quality, so that fewer recall are necessary.
2) Recalls will occur earlier than in the past, making recalls less expensive, reducing deaths and injuries, and reducing litigation and insurance claims
3) Make the recalls less harmful to a manufacturer's reputation
4) Reduce total manufacturer costs because it is cheaper to make vehicles with fewer defects than to recall and repair defects after they are in the field
5) Reduce costly public relations disaster that result when defects become major and gain substantial publicity.

The agency had discussed some of these points in the NPRM. A few of Dr. Nash's suggestions, and an attempt to quantify some of these benefits, have been adopted in the agency's benefit estimates in Chapter VI.

The Association of International Automobile Manufacturers, Inc. (AIAM) stated that overly broad reporting requirements could result in wasted resources spent compiling and analyzing large amounts of marginally useful documentation. AIAM stated that the burdens associated with the one-time historic report are substantial. AIAM stated that the one category that may be

feasible to develop an historic report is warranty claims, since they have been coded with sufficient detail, and provide a large amount of data.

AIAM's member companies provided estimates for the cost associated with the proposed reporting requirements. For programming and start-up costs to process information for future reports, the estimates ranged from $250-$300,000 for a small company up to $3.5 million for one of their larger members. On moderate-to-large sized company estimated a cost of $600,000 to $1 million to set up the system for tracking customer complaints. Annual operating costs for coding and other support services ranged from $150,000 - $200,000 per year for a small company to $650,000 for a large company. The cost for preparing the one-time historic report ranged from $200,000 per category up to $9.9 million for the full report for a large company. A moderate-to-large sized company estimated a cost of $1 to $3 million to prepare the historical reporting for consumer complaints and property damage claims. A small company estimated the warranty portion of the historic data report at $75,000, which is about one-third the amount for the customer complaint or field report category cost of reporting.

Nissan North America, Inc. supports the agency's efforts in moving forward with this rulemaking. Nissan stated that the requirements must be based on clearly defined terms. The agency must also strive to prevent multiple reporting. Eliminating consumer complaints will largely address this issue.

Honda Motor Co., Ltd. stated that more focused requirements to report foreign recalls and consumer campaigns, as required by the TREAD Act, would make sufficient data available to NHTSA to expose problems such as the Ford/Firestone issue.

Alliance of Automobile Manufacturers (Alliance) stated that the reporting requirements will require a significant commitment of resources on the part of the manufacturers that are subject to the new rules. In addition, related, but separate companies are likely to report separately, utilizing data in their own systems, thereby increasing the number of reporting systems that will have to be established. Alliance stated that most of its member companies are at different levels of automation for the many different requirements. Thus, the incremental costs of compliance are very different between the different companies and cannot be categorized by large company versus small company. The one-time setup costs for computer hardware, software, and personnel were estimated to be approximately $42 million.

Alliance estimated the cost to prepare a report of historical warranty claims, property damage claims, consumer complaints and field reports for a three-year retroactive period approximately $10.5 million. Of these, historical warranty costs alone would cost $355,000, field reports would cost $4.66 million, consumer complaints would cost $4.38 million and property damage complaints would cost $1.1 million. The Alliance urged the agency to limit historical data to information in the manufacturer's existing warranty systems.

Alliance estimated ongoing costs of compliance at approximately $10 million per year. Prevailing wages, including overhead, were provided as follows: $113.80/hour for information

technology (IT) professionals, $101.92/hour for professional engineering staff and legal, $73.55/hour for technical staff and $23.99/hour for clerical staff.

One error made by the Alliance and others is that they assumed that the NPRM proposed that hard copies of field reports must be submitted to NHTSA. This would include providing hard copies of photos or other digital images. The NPRM requested copies of manufacturer and fleet reports, but not dealer reports, and allowed these reports to be submitted electronically. Electronic submittal would be much cheaper than providing hard copies. Thus, we believe the field report estimate of $4.66 million provided by the Alliance is too high.

Ford Motor Co. reported that the North American operations of Volvo, Mazda, Jaguar, Land Rover and Aston Martin presently collect, analyze, and will report much of the information requirements separately from Ford, Lincoln, Mercury and Think systems, and separately from each other, using different coding methods. Ford's recently developed Enhanced Concern Identification System (ECI) will improve Ford's ability to detect and remedy safety defects. This system will collect and analyze data now stored in a variety of different systems within the Ford, Lincoln and Mercury brands. The ECI will be able to provide some of the requested information proposed in the rule.

Ford stated that requiring information at a component, rather than a vehicle level, or for systems other than those proposed, will necessitate submitting increasing volumes of increasingly less useful information. Ford stated that it is essential to limit the searches for early warning

information to those databases where information is stored electronically and is most likely to be found.

General Motors Corporation (GM) stated that the one-time historical reporting substantially increases the burden since much of GM's data has not been coded in a manner that would permit ready assembly into retroactive reports. GM also stated that separating vehicle reporting by fuel type is burdensome. GM stated that supplementation of previously submitted early warning information, and production of field reports would place an additional burden on manufacturers.

Advocates for Highway and Auto Safety (Advocates) does not view the additional cost of preparing the data for submission or converting information into a form the agency can use as unduly burdensome. Advocates stated that "additional benefits of early defect detection and recall include reduced costs associated with product liability claims, litigation and settlements, avoiding the loss of brand or model name use, limiting reduction in product sales, preventing plant and factory closures, avoiding greater negative publicity and restore product integrity in the marketplace." Advocates stated that the overall cost for the program would be modest compared to the benefits of averting one defect on the scale of the Bridgestone/Firestone and Ford Explorer incidents.

IV. ALTERNATIVES

Based on comments to the docket on costs and benefits, and the agency's need for information, alternatives were developed for the analysis. There are many pieces of information required by Congress and additional pieces of information proposed by NHTSA in the NPRM. The first alternative (Alternative 1) was to examine the costs and benefits of the NPRM. Alternative 2 is the final rule and Alternative 3 examined a different combination of reported data.

The requirements and cost information were divided into three pieces. First is the effort to purchase computer hardware in some documents and to develop computer software. So, anytime there is a consumer complaint, or warranty claim, the dealer would enter the data into the computer system, get the correct prompts, and have it stored correctly for future use. Anytime there is a claim sent to the manufacturer for a fatality, injury, or property damage, these would be entered into the system and stored correctly for future use, etc. Setting up these systems initially is an enormous task, but once it is done, the maintenance of such a system is not significant.

Second, the agency proposed to require three years of various historical data to be reported in the first year to "seed" the database. Most of the comments regarding excessive costs dealt with the historical data. The main reason was that not all manufacturers had this historical data automated and it would require a manual look through a significant amount of information to develop the information needed to be reported. There are three pieces of information that had a

significant number of documents involved: warranty claims, consumer complaints, and field reports. Warranty claims appear to be automated by almost everyone and with some computer programming costs can be separated into the appropriate categories. Most of the commenters' complaints were about historical consumer complaints and field reports. Treatment of this data is the difference between Alternative 2 and Alternative 3.

Third are annual data that must be reported quarterly. The early warning provision provides for NHTSA to require submission of information, and the agency did not receive many comments about their costs. However, there was one misunderstanding that affected costs. The Alliance believed that the agency proposed to require hard copies of all field reports. The agency actually considered two categories of field reports, those by representatives of the manufacturers or fleet owners (these are called field reports throughout this analysis) and those by dealers (these are called dealer field reports throughout this analysis). The agency did not propose to require copies of dealer field reports, which is by far the more numerous type of field report. Finally, the agency did not propose requiring hard copies, but will accept electronic copies, which reduces the costs of printing and mailing copies to the agency.

Table 1 shows the alternative requirements considered by the Agency. The differences in the alternatives that impact on this analysis are with the three-year historical data. There are differences between the NPRM and Final Rule for the annual reporting requirements. But they have minimal impact on costs and benefits. The NPRM (Alternative 1) proposed to require information to be submitted on five categories. The final rule (Alternative 2) requires

information on three categories. Alternative 3 would require information on two categories. All three of the alternatives considered requiring the same information on an annual basis.

Compared to the NPRM, historical property damage and historical consumer complaints are not included in the final rule. Compared to the NPRM, historical property damage, historical consumer complaints, and historical dealer field reports are not included in Alternative 3. As will be shown in the next section of costs, historical consumer complaints and historical dealer field reports are the biggest cost items considered in this rulemaking.

TABLE 1
REQUIREMENTS OF THE ALTERNATIVES

	3 Year Historical Data				Annual On-going Costs		
	Alt. 1 NPRM	Alt. 2 Final Rule	Alt. 3		Alt. 1 NPRM	Alt. 2 Final Rule	Alt. 3
Claims/Notices for Fatality/Injury					X	X	X
Property Damage Claims	X				X	X	X
Warranty Claims	X	X	X		X	X	X
Consumer Complaints	X				X	X	X
Field Reports (Manu. And Fleet)	X	X	X		X	X	X
Field Reports (Dealer)	X	X			X	X	X
Customer Satisfaction Campaigns					X	X	X
Foreign Reports (Claims for Death)					X	X	X

X – means that requirements for this area are included in the Alternative

There were a number of other alternatives that the agency considered, but did not propose in the NPRM. The rationales for not proposing these were included in the Preliminary Regulatory Evaluation[1]. Briefly, they are: 1) we considered requiring reporting of foreign injury and property damage information; 2) we considered requiring information for all systems and parts of the vehicles, instead of the specific components specified under the rule; 3) we considered requiring five years of historical data, instead of three years of historical data; 4) we considered whether to require a hard copy of all fleet reports, manufacturer reports and dealer reports; 5) we considered requiring a hard copy of original equipment manufacturer reports.

[1] "Preliminary Regulatory Evaluation, Tread Act, Early Warning Reporting System, Part 579," November 2001, NHTSA, Docket No. 8677-64.

V. COST AND LEAD TIME

A. Manufacturer Cost Estimates

The tasks associated with TREAD Act reporting under the Final Rule include:

Computers - Manufacturers must construct or modify electronic databases

Gathering and Recording Information - gather information and data, determine whether the information must be reported, and enter the data into the databases.

Copying and Submission - Manufacturers must copy and submit information to NHTSA electronically or in hard copy.

1. Methodology

a) Estimate the number of manufacturers in each category. (See Table 2)

b) Estimate the number of documents (claims, contacts, reports, documented phone calls, etc.) of information that manufacturers will provide to NHTSA. (See Table 3 and Table 4)

c) Identify and describe the reporting tasks that manufacturers will have to perform to comply with the TREAD Act.

d) Estimate the typical number of hours of labor needed to complete each reporting task. Based on wage rates, calculate the unit cost of each task. (See Table 5)

e) For each manufacturer category, multiply the unit cost of each task by the number of submissions. Sum the results in that industry category to compute the total manufacturers' costs.

The skills required to comply with TREAD Act Early Warning Reporting Requirements may vary from manufacturer to manufacturer depending on the category of manufacturer of vehicles and equipment (e.g., light vehicles, child restraints), the kind of information and data reported, and the form in which the information is reported. Those responsible for reporting may have engineering, legal, or other professional or clerical backgrounds. Necessary skills may include information technology resources and translation from foreign languages to English.

TABLE 2

ESTIMATED NUMBER OF MANUFACTURERS

VEHICLE/EQUIPMENT CATEGORY	NUMBER OF MANUFACTURERS*
Light Vehicles	16
Medium and Heavy Vehicles	12
Buses	19
Trailers	8
Motorcycles	12
Tires	10
Child Restraints	10

* For vehicle manufacturers, this is the estimated number manufacturing 500 or more vehicles annually

TABLE 3

ALLIANCE OF AUTOMOBILE MANUFACTURERS
ESTIMATED CLAIMS/CALLS AND DOCUMENTS RECEIVED
CALENDAR YEAR 2000, UNITED STATES

Category of Information	Number
Claims/Notices alleging an injury or fatality	9,200
Customer Contacts	12,700,000
Warranty Claims	99,900,000
--Warranty Claims/Brakes	4,800,000
--Warranty Claims/Steering Systems	3,200,000
Field Reports	Over 45,000
Dealer Reports	Over 2,000,000
Customer Satisfaction Campaigns	125
Property Damage Claims	8,200

Source: Alliance of Automobile Manufacturers, submission to docket NHTSA 2001- 8677, July 16, 2001.

TABLE 4

VEHICLE MANUFACTURER
ESTIMATED CLAIMS/CALLS AND DOCUMENTS RECEIVED
CALENDAR YEAR 2000, UNITED STATES

	Light Vehicles	Medium and Heavy Vehicles	Buses	Trailers	Motorcycles
Recall Factor		***0.04788***	***0.00924***	***0.00101***	***0.00697***
Category					
Claims/Notices Injury/Fatality	10,023	480	92	10	70
Customer Contacts	13,835,500	608,076	117,348	12,827	88,519
Mfr. Field Reports	25,525[2]	1,222	236	26	178
Dealer Reports	2,178,824	104,322	20,132	2,201	15,186
Customer Satisfaction Campaigns	136	7	1	0.1	0.9
Property Damage Claims	8,933	428	83	9	62

Source: Alliance of Automobile Manufacturers, submission to docket NHTSA 2001- 8677, July 16, 2001. Later in the analysis, the cost estimates for light vehicles are adjusted to take into account that not all light vehicle manufacturers are member of the Alliance.

[2] Adjusted based on the ratio of average number of recalls per year of components covered by Early Warning Reporting to the average number of recalls per year of all components during the five-year period 1996 to 2000.

TABLE 5

HOURLY WAGE RATES BY OCCUPATION

Occupation	2002 Hourly Wage Rate $
Attorney	101.92
Engineer	101.92
Information Technology	113.80
Technical	73.55
Clerical	23.99

Source: Based on Alliance of Automobile Manufacturers submission to Docket No. NHTSA 2001-8677-409, Notice 2, May 3, 2002. These costs include hourly wage rates plus overhead.

2. Number of Documents to Review

The Alliance of Automobile Manufacturers, whose members are BMW Group, DaimlerChrylser, Fiat, Ford Motor Company, General Motors, Isuzu, Mazda, Mitsubishi Motors, Nissan, Porsche, Toyota, Volkswagen and Volvo, submitted information about the estimated quantities of information in certain of the possible reporting categories. (Table 3)

To estimate the number of documents received for vehicle categories, we multiplied the number of estimated claims/calls and documents received by the Alliance for light vehicles (Table 4, column number two) by a recall factor for each of the other vehicle manufacturer categories. The recall factor was determined by taking NHTSA data from 1996 to 2000 of the number of recalls for each category of vehicle manufactured. For example, there were 4,292,129 medium and heavy trucks recalled compared to 89,634,055 light vehicles recalled. Thus, the recall factor for medium and heavy trucks is 0.04788. The recall factor (0.04788) for medium and heavy trucks is applied to the number of claims, contact, reports, etc., in each of the reporting categories (claim/lawsuits injury/fatality, customer contacts, warranty claims, field reports, dealer reports, property damage claims) in light vehicles provided by the Alliance, to calculate the number of documents for each reporting category for medium and heavy trucks. This methodology is continued for each of the vehicle and equipment manufacturers to estimate the number of documents for each of the manufacturers in each reporting category.

3. Unit Cost Estimates

Computer start-up costs and maintenance costs

Docket comments from the Alliance[3] on computer start-up costs of $42 million and labor hours of 333,400 were the basis for the estimated computer start-up costs for light vehicles. These costs were increased to account for other manufacturers that are not part of the Alliance. For the other (non-light vehicle) manufacturers, the agency used its own burden hour estimates and cost estimates of $200,000 per manufacturer, but adjusted that estimate to include docket comments from Harley motorcycles and child restraint manufacturers. For the second group of manufacturers, those with less than 500 employees and equipment manufacturers, we assumed that they would have so few claims of fatalities that they would not set up a computer system for reporting, but would review and process the claims manually as they came in. We assumed more burden hours per case for these manufacturers, since they would not be automated. We estimate that the total one-time computer startup cost is $65.3 million for all vehicle and equipment manufacturers.

The total ongoing annual cost (annual ongoing is defined as a prospective look, to separate it from historical information) for computer maintenance for all manufacturers is $1.3 million, based on the total estimated computer maintenance hours per company multiplied by the wages for information technology personnel.

Costs for reporting on historical data and on-going annual costs

This section explains how the cost estimates were developed for each category of report that manufacturers may have to perform under the final rule. These costs are calculated by multiplying the labor hours by the average hourly wages and the number of manufacturers.

Each cost estimate is made up of two components: the unit time estimates (i.e., number of labor hours required of each type of personnel to complete a task), and the hourly wage rates for these personnel. Hourly wage rates are divided into five occupations: attorney, engineer, information technology, technical, and clerical (see Table 2).

The historical reporting costs for light vehicle manufacturers are based on reporting costs submitted by the Alliance to meet the reporting requirements for various categories. This figure is adjusted to include light vehicle manufacturers not in the Alliance. Also, the Alliance estimates were adjusted to account for the fact that they assumed that hard copies of field reports were required, when only electronic copies of those reports could be submitted. In our opinion, this mistaken assumption significantly increased the cost estimates for field reports. The total ongoing annual costs for light vehicle manufacturers are based on wage rates for personnel reviewing and processing the reports, applied to the estimated time incurred in the reporting process.

The reporting costs for the other vehicle and equipment manufacturers are calculated differently because their costs were not provided to us in docket comments and their reporting burdens are much different than the light vehicle manufacturers. While the Alliance found that some

[3] See Docket # 8677 Nos. 409 and 443.

manufacturers had some data automated and other manufacturers had different data automated, for the other manufacturer categories (medium/heavy truck, trailers, motorcycles, child restraints, etc.) we conservatively assumed that they had none of this data automated and would have to manually sort through the data to determine which safety system was involved.

For example, the historical reporting costs for medium and heavy truck manufacturers for consumer complaints were estimated as follows: There are an estimated 1,987,335 documents to review over the three year period. We assume it will take 5 minutes on average to manually look at each of these documents and determine whether it must be reported on and which safety item and to enter it into a database. We assume the labor will be broken down into 3 minutes of technical time (at $73.55 per hour) and 2 minutes of clerical time (at $23.99 per hour) for a weighted average wage rate of $53.726. Combined, the cost estimate is shown on Table 7 for medium heavy vehicles for consumer complaints of $8,897,632 (1,987,335*5 minutes/60 minutes per hour * $53.726 per hour). Thus, the estimates are based on the estimated number of documents, the estimated number of minutes incurred in meeting the reporting requirements for a reporting category, applied to the estimated wage rates for personnel doing that task (engineer, lawyer, information technology, technical, clerical).

The ongoing annual costs for medium and heavy trucks are calculated in the same manner based on the number of ongoing documents per year (these were calculated by using the recall factor that was applied to the number of submissions estimated by the Alliance, adjusted to include light vehicles not included in the Alliance, to arrive at estimated number of documents for other

manufacturers) which is multiplied by the time required to review and process the documents, and the estimated wages per hour submitted by the Alliance.

The historical and annual costs for the NPRM for all vehicle and equipment categories are shown on Table 7 and Table 9. Tables 6 and 8 present historical and annual burden hours for the NPRM for all vehicle and equipment categories.

While the final rule requires equipment manufacturers and vehicle manufacturers with sales of under 500 vehicles per year to report on claims or notices of deaths related to defects, we have assumed that there will be so few of these claims or notices of deaths received by these companies that they would not set up computer systems to handle this small number and that their costs will be very small.

Three alternatives are presented in Tables 10 to 15. Tables 10 and 11 present Alternative 1, the NPRM burden hours and costs. For each of the alternatives we assume that annual warranty claims, annual consumer complaints and annual field reports will not impose incremental burden hours and costs once the computer systems are set up. Currently, these data are collected somewhere, now there will be a different computer system set up to handle these entrees and bin them into the correct categories for reporting to NHTSA. We also assume that the burden hours for 3-year historical warranty claims have been included in the computer startup costs. The rationale for this assumption is that warranty claims are already automated, and in setting up the computer system, they will setup the software to handle historical warranty claims. However,

the Alliance provided us cost estimates for 3-year historical warranty claims. Those estimates have been marked up for all manufacturers.

Tables 12 and 13 show Alternative 2, the burden hours and costs for the Final Rule. Compared to the NPRM, the Final Rule alternative does not include historical consumer complaints and historical property damage.

Tables 14 and 15 present Alternative 3, which is the Final Rule minus historical dealer field reports. Compared to the NPRM alternative, this alternative does not include historical consumer complaints, historical property damage, and historical dealer field reports.

Table 16 presents the Summary of Costs and Burden Hours for the three alternatives. The costs are divided into manufacturers' first year total burden hours and costs, and annual ongoing burden hours and costs. The differences between the first year costs and hours for alternatives 1, 2, and 3, are due to the exclusion of certain reporting requirements, as shown in Tables 10 to 15. While there are some differences between the NPRM and the Final Rule that impact the annual ongoing reporting requirements, those are not believed to change the costs to any noticeable extent.

Retention of Records Costs

The final rule has increased the length of time that certain records must be retained, although these times are shorter than was proposed in the NPRM. Given these records are electronic, and

the advancement in computers and electronic storage, the agency believes that this increase in cost is minimal.

TABLE 6
NPRM
THREE YEARS HISTORICAL
BURDEN HOURS

	Light Vehicles	Med. Hvy. Vehicles	Buses	Trailers	Motorcycles	Tires	Child Restraints	Equip. Mfr.	Cos. Under 500	Total
Claims/Notices Injury Fatality	0	0	0	0	0	0	0	0	0	0
Property Damage	2233	107	21	2	16	0	0			2379
Warranty Claims		IT time								
Consumer Complaints	59151	165611	31960	3493	24108	0	2500			286824
Mfr. Field Reports	6499	306	59	6	44	246	0			7160
Dealer Field Reports	10030	26081	5033	550	3797	0	0			45490
Customer Satisfaction	0	0	0	0	0	0	0			0
Foreign Death Claims	0	0	0	0	0	0	0			0
Reporting Costs	128	48	38	8	48	40	40	0	0	350
Total	78041	192152	37111	4060	28013	286	2540	0	0	342203

TABLE 7

NPRM
THREE YEAR HISTORICAL
COSTS
$

	Light Vehicles	Med. Hvy. Vehicles	Buses	Trailers	Motorcycles	Tires	Child Restraints	Equip. Mfr.	Cos. Under 500	Total
Claims/Notices Injury Fatality	0	0	0	0	0	0	0	0	0	0
Property Damage	1198353	5745	1109	121	836	0	0	0	0	1206164
Warranty Claims	386741	18517	3573	391	2696	29095	38664	193	116	479985
Consumer Complaints	4771624	8897632	1717087	187690	1295248	0	134315	0	0	17003596
Mfr. Field Reports	349165	16415	3168	346	2390	13190	0	0	0	384674
Dealer Field Reports	538872	1401202	270407	29558	203976	0	0	0	0	2444015
Customer Satisfaction	0	0	0	0	0	0	0	0	0	0
Foreign Death Claims	0	0	0	0	0	0	0	0		0
Reporting Costs	14566	5462	4324	910	5462	4552	4552	0	0	39830
Total	7259321	10344973	1999669	219016	1510608	46836	177531	193	116	21558264

TABLE 8

NPRM
ANNUAL BURDEN HOURS

	Light Vehicles	Med. Hvy. Vehicles	Buses	Trailers	Motorcycles	Tires	Child Restraint	Equip. Mfr.	Cos. Under 500	Total
Claims/Notices Injury Fatality	835	40	8	1	6	63	84	0	0	1037
Property Damage	744	36	7	1	5	0	0			793
Warranty Claims			nothing incremental							
Consumer Complaints			nothing incremental							
Mfr. Field Reports	2127	102	20	2	15	82	0			2347
Dealer Field Reports			nothing incremental							
Customer Satisfaction	11	1	0	0	0	0	0			12
Foreign Death Claims	681	33	0	0	5	19	3			739
Reporting Costs	512	192	152	19	192	160	160	20	12	1419
Computer Maintenance	5552	1038	1644	692	1038	865	865	0	0	11694
Total	10463	1441	1830	715	1261	1188	1111	20	12	18042

TABLE 9
NPRM
ANNUAL COSTS
$

	Light Vehicle	Med. Hvy. Vehicles	Buses	Trailers	Motorcycles	Tires	Child Restraints	Equip. Mfr.	Cos. Under 500	Total
Claims/Notices Injury Fatality	54250	2829	546	60	412	4445	5907	29	18	68497
Property Damage	36713	1915	370	40	279	0	0	0	0	39317
Warranty Claims										
Consumer Complaints										
Mfr. Field Reports	46840	5472	1056	115	797	4397	0	0	0	58676
Dealer Reports										
Customer Satisfaction	560	29	6	1	4	0	0	0	0	600
Foreign Death Claims	57206	2984	0	0	434	1716	229	0	0	62569
Reporting Costs	58266	21850	17298	2179	21850	18208	18208	2276	1366	161499
Computer Maintenance	631818	118124	187030	78750	118124	98437	98437	0	0	1330720
Total	885653	153203	206305	81145	141899	127203	122781	2305	1383	1721877

TABLE 10

ALTERNATIVE 1
NPRM
BURDEN HOURS

	Computer Startup*	3 Years Historical	Annual
Claims/Notices Injury/Fatality		-	1,037
Property Damage		2,379	793
Warranty Claims**		-	-
Consumer Complaints**		286,824	-
Manufacturer Field Reports		7,160	2,347
Dealer Field Reports**		45,490	-
Customer Satisfaction		-	12
Foreign Death Claims		-	739
Reporting		350	1,419
Computer Maintenance		-	11,694
Total	596,760	342,203	18,042

* Computer startup hours not broken out by individual categories.
** Assumes historical and annual warranty claims, annual consumer complaints and annual dealer field reports are already included in computer burden costs.

TABLE 11
ALTERNATIVE 1
NPRM
COSTS
$

	Computer Startup*	**3 Years Historical**	**Annual**
Claims/Notices Injury/Fatality		-	$ 68,497
Property Damage		$1,206,164	39,317
Warranty Claims**		479,985	-
Consumer Complaints**		17,003,596	-
Manufacturer Field Reports		384,674	58,676
Dealer Field Reports**		2,444,015	-
Customer Satisfaction		-	600
Foreign Death Claims		-	62,569
Reporting Costs		39,830	161,498
Computer Maintenance		-	1,330,720
Total	$65,300,000	$21,558,264	$1,721,877

* Computer startup costs not broken out by individual categories.
** Assumes annual warranty claims, annual consumer complaints and annual dealer field reports are already included in computer burden costs.

TABLE 12
ALTERNATIVE 2
FINAL RULE*
BURDEN HOURS

	Computer Startup**	**3 Years Historical**	**Annual**
Claims/Notices Injury/Fatality		-	1,037
Property Damage		-	793
Warranty Claims***		-	-
Consumer Complaints***		-	-
Manufacturer Field Reports		7,160	2,347
Dealer Field Reports***		45,490	-
Customer Satisfaction		-	12
Foreign Death Claims		-	739
Reporting		350	1,419
Computer Maintenance		-	11,694
Total	596,760	53,000	18,042

* Final Rule does not include historical consumer complaints and historical property damage.

** Computer startup hours not broken out by individual categories.

*** Assumes historical and annual warranty claims, annual consumer complaints and annual dealer field reports are already included in computer burden hours.

TABLE 13
ALTERNATIVE 2
FINAL RULE*
COSTS
$

	Computer Startup**	3 Years Historical	Annual
Claims/Notices Injury/Fatality		-	$68,497
Property Damage		-	39,317
Warranty Claims***		$479,985	-
Consumer Complaints***		-	-
Manufacturer Field Reports		384,674	58,676
Dealer Field Reports		2,444,015	-
Customer Satisfaction		-	600
Foreign Death Claims		-	62,569
Reporting Costs		39,830	161,498
Computer Maintenance		-	1,330,720
Total	$65,300,000	$3,348,504	$1,721,877

* Final Rule does not include historical consumer complaints and historical property damage.
** Computer startup costs not broken out by individual categories.
*** Assumes annual warranty claims, annual consumer complaints and annual dealer field reports are already included in computer burden costs.

TABLE 14

ALTERNATIVE 3
FINAL RULE* MINUS DEALER REPORTS
BURDEN HOURS

	Computer Startup**	3 Years Historical	Annual
Claims/Notices Injury/Fatality		-	1,037
Property Damage		-	793
Warranty Claims***		-	-
Consumer Complaints***		-	-
Manufacturer Field Reports		7,160	2,347
Dealer Field Reports		-0-	-
Customer Satisfaction		-	12
Foreign Death Claims		-	739
Reporting		350	1,419
Computer Maintenance		-	11,694
Total	596,760	7,510	18,042

* Final Rule does not include historical consumer complaints and historical property damage.

** Computer startup hours not broken out by individual categories.

*** Assumes historical and annual warranty claims and annual consumer complaints are already included in computer burden hours.

TABLE 15
FINAL RULE* MINUS DEALER REPORTS
COSTS
$

	Computer Startup**	**3 Years Historical**	**Annual**
Claims/Notices Injury/Fatality		-	$68,497
Property Damage		-	39,317
Warranty Claims***		$479,985	-
Consumer Complaints***		-	-
Manufacturer Field Reports		384,674	58,676
Dealer Field Reports		-0-	-
Customer Satisfaction		-	600
Foreign Death Claims		-	62,569
Reporting Costs		39,830	161,498
Computer Maintenance		-	1,330,720
Total	$65,300,000	$904,489	$1,721,877

* Final Rule does not include historical consumer complaints and historical property damage.
* * Computer startup costs not broken out by individual categories.
*** Assumes annual warranty claims and annual consumer complaints are already included in computer burden costs.

TABLE 16

SUMMARY OF COSTS AND BURDEN HOURS

	Manufacturers' Burden Hours First Year Total *	**Manufacturers' Costs First Year Total ***
Alternative 1 NPRM	957,005	$88,580,141
Alternative 2 Final Rule	667,802	$70,370,381
Alternative 3 Final Rule minus Dealer Reports	622,312	$67,926,366

	Manufacturers' Burden Hours Annual Ongoing	**Manufacturers' Costs Annual Ongoing**
Alternative 1 NPRM	18,042	$1,721,877
Alternative 2 Final Rule	18,042	$1,721,877
Alternative 3 Final Rule minus Dealer Reports	18,042	$1,721,877

* Includes computer startup, 3 years historical hours and costs, and annual hours and costs.

B. NHTSA Cost Estimates

Implementing Section 3(b) of the TREAD Act is expected to result in increased costs of government operations. This will be due almost entirely to the need to process submissions from manufacturers.

NHTSA estimates additional annual expenditures of $550,000 on (contract) personnel for database support and $110,000 for PC network support.

NHTSA initiated development of the Artemis project (Advanced Retrieval (Tire, Equipment, Motor Vehicles) Information System) on April 2, 2001. Artemis, the result of business re-engineering and application development effort, will provide us with business process and technological enhancements to identify potential safety defects earlier. The system will include a document management system, public availability of documents/data procedures, data analysis tools, centralized storage, consistent data naming conventions and workflow. The total estimated development cost of Artemis is $5.3 million, with an additional $700,000 annual cost for computer technical support for additional full time employees.

VI. BENEFITS

Implementation of the TREAD Act Early Warning Requirements is expected to result in a decrease in the number of injuries and fatalities caused by a possible defect in motor vehicles and equipment. A review of recall data of vehicles included in this rulemaking indicates a total of 89,634,055 light vehicles were recalled during the period 1996 to 2001. Recalls for medium and heavy vehicles totaled 4,292,129, buses totaled 828,372, trailers totaled 90,668, and motorcycles totaled 625,144. Additionally, there were 15,024,251 tires recalled (in 23 recalls), and 9,171,609 child seats recalled (in 27 recalls).

One benefit of receiving the early warning data is that investigations will be opened sooner. Another benefit is that NHTSA could open investigations on documents that would otherwise escape our notice. We will initiate more recalls, earlier, and expect fewer consumer injuries and fatalities from crashes and fires. For example, we estimate that if a recall would have been announced two years earlier (August 9, 1998 instead of August 9, 2000) on the ATX and Decatur Wilderness tires, 143 lives that were lost due to alleged tread separation, out of a total of 192 fatalities that occurred, may have been saved.

Every recall has a different time-line of events. We have tried to capture an average recall for analysis purposes. The time-line can be broken up into the screening phase and the formal investigation phase. Starting from the time a manufacturer first gets a complaint from a customer, 24 months can go by before NHTSA first gets a complaint to the HOTLINE. During this time, particularly for new models, the complaints are handled as warranty claims. If a

customer has his/her complaint fixed by the dealer, most people would not go the extra step of reporting it to NHTSA.

From the time NHTSA first gets a report about a potential defect, to the time it takes for NHTSA to decide to open a formal investigation, can take 3 to 12 months. This range depends upon the number of reports received, the rate of vehicles with a problem, and the seriousness of the safety problem. Thus, the screening phase can take 27 to 36 months from the start of customers having problems until NHTSA opens a formal investigation.

Based on data from 1996 to 2000, the formal investigation phase takes 9 months on average from the time NHTSA opens a formal investigation until there is an influenced recall. This includes a weighted average of recalls influenced during the preliminary evaluation phase and those influenced during the engineering analysis phase.

The total time for the screening phase and the formal investigation phase is an estimated 36 to 45 months. We assume that receiving the early warning data will reduce the screening phase by

approximately 12 months. Thus, we believe that implementing the Early Warning Reporting requirements will reduce the overall time to screen and conduct an investigation by 27 – 33 percent (12/45 and 12/36).

We also expect that manufacturers will find out about some of their voluntary recalls earlier, because they will be collecting this data and examining it before, or shortly after it gets sent to NHTSA. For example, if 10 percent of the voluntary recalls per year were found 3 months earlier, we estimate that 25 recalls a year would be found 3 months earlier (there are 251 voluntary recalls per year, if 10 percent of them were found earlier, that would be 25 recalls a year found earlier).

We expect that there will be more defect determinations following opening of investigations (influenced recalls) by NHTSA. This is because the increased volume of early warning data is expected to prompt a more intensive scrutinizing of data by NHTSA, and therefore less likelihood that a defect will go undetected. We also expect more defect determinations by manufacturers following their review of their own data (uninfluenced recalls). We estimate that total recalls (voluntary recalls by the manufacturer and NHTSA influenced recalls) would increase by 10 percent. During the period 1996 through 2000, there were an average of 314 defect recalls per year (275 vehicles, 36 equipment, 3 tires). We estimate that a 10 percent increase would result in an additional 31 defect recalls annually, (25 manufacturer voluntary and 6 NHTSA influenced).

The agency cannot estimate the quantitative impact on fatalities and injuries as a result of an increase in future recalls. However, the intent of the Early Warning Program is to never have another situation evolve in which there are many fatalities occurring before the agency determines that they are being caused by a potential defect.

The agency has made an estimate of the value to manufacturers of recalling vehicles earlier. The methodology for this estimate consists of the following:

1. Examining recall data from 1996 to 2002. This data was divided into the following categories, light vehicles, medium and heavy vehicles, buses, motorcycles, and trailers. Available data included the number of recalls, the number of vehicles involved in each recall, the model year(s) involved in the recall, and the date of the recall.
2. We looked at a subset of these data that involved some vehicles that were in the recall being three to six years old (these are called three to six year old vehicles in the following example analysis). The theory was that warranty data would provide much of the information for vehicles less than three years old.
3. We looked at the average years that the vehicle was in production and whether the make/model vehicle was still in production when the recall occurred.
4. We estimated that the average recall cost to a manufacturer of $100 per recalled vehicle.
5. We assumed that the early warning system would result in a recall occurring three months sooner, and determined how many vehicles would be saved from being produced each year with a defect that would later be recalled by catching the defect three months sooner.

6. We assume that 90 percent of the vehicles would be fixed. The high estimate for the percent of vehicles being fixed results from the assumptions that we are talking about the latest 3 months of production, many of those vehicles would not have been sold yet and must be fixed by the dealer before they are sold, and a high percent of new owners respond to a recall notice.

The full analysis was not done on tires or child restraints for several reasons, including the cost per recall being different, the number of recalls in the 3-6 year period being small, etc.

A sample calculation follows for the light vehicles:

There were 45,017,911 three to six year old vehicles recalled from 1996-2002 in 187 recalls. That is an average of 240,737 vehicles per recall. The average years those vehicles were in production was about 4.2 years. Thus, of the recalled vehicles the average yearly production was 57,348 (240,737/4.2); and in three months the production is 14,337. There were 187 recalls over those 7 years or 26.7 recalls per year. Of those three to six year old vehicles, 24 percent still had production ongoing when the recall occurred. Thus, on a yearly basis, there are 91,920 (14,337*26.7*.24) vehicles that could be saved from being produced per year if the average recall could be found 3 months earlier than today. At an estimated $100 per vehicle recalled, and 90 percent being fixed, the cost savings to the manufacturers would be about $8.3 million annually.

This same analysis was performed for medium and heavy trucks, buses, trailers, and motorcycles with the results shown in Table 17. In total, the benefit to manufacturers would be over $9 million per year.

Table 17
Estimated Manufacturer Benefits from Shortening the
Time to Recall Vehicles by 3 Months

	Annual Manufacturer Benefits
Light Vehicles	$8,272,800
Medium and Heavy Trucks, Buses	699,400
Trailers	11,300
Motorcycles	55,900
Total	$9,039,400

Benefits by Alternatives:

As seen in Table 1, the major difference between the alternatives is the amount of historical data that must be reported. The agency cannot quantify the influence this data would have on its investigations over the next few years. There were two major cost items proposed in the NPRM for historical data, consumer complaints and field reports. The manufacturers did not object to providing historical warranty data, and the cost of providing historical property damage claims is relatively low. The agency firmly believes that is needs some historical data in order to be able to effectively utilize the early warning data right away, rather than wait several years until we receive a sufficient number of quarterly reports to allow trend analysis. However, to minimize the burden on manufacturers, we decided that we would only require one of these "high cost" items. We chose to require historical field report data (as opposed to consumer complaint data)

for several reasons. First, the agency believes that the manufacturer field reports provide the "richest" data, in terms of the depth of analysis and the amount of detail in the information. Currently, the agency regularly requires manufacturers to provide field reports about alleged defects. These have proven very valuable in our investigations. That is why it is requiring copies of these field reports. Second, although dealer field reports may not have as much technical detail and analysis, they arise out of issues that dealers thought were worthy of bringing to the attention of the manufacturer. Dealer field reports are one of the bases upon which manufacturers become aware of defects. Any given dealer may see a problem area on a particular make/model only once every few months. But if a problem shows up at hundreds of dealers once every few months, then the agency needs to know about it. Finally, the agency looked at consumer complaints. There are an estimated 6.3 times as many consumer complaints than dealer field reports. So, the costs of reviewing historical complaints to place them n the appropriate system and component categories would be proportionately greater. Also, the consumer complaints are not considered as "rich", in terms of not having any analysis by a representative of the company, and often are not as precise as field reports. Moreover, NHTSA already has some historical consumer complaints that were received via our HOTLINE and Internet website.

VII. NET COSTS

The agency has made no estimate of the safety benefits resulting from the final rule. For this chapter the net costs are an analysis of the costs by manufacturer type compared to the economic benefits (not safety benefits) by manufacturer type. Table 18 provides the data used in this analysis from Alternative 2 for the final rule:

Table 18
Net Costs*
(in millions)

	Computer Set-up Costs	Historical Data Costs	On-going Costs	Total Year 1 Costs	On-Going Benefits	Net On-Going Costs	Net Year 1 Costs
Light Vehicles	$46.3	$1.29	$0.89	$48.48	($8.27)	($7.38)	$40.21
Medium/Heavy Vehicles,Buses	6.2	1.72	0.36	8.28	(0.70)	(0.34)	7.58
Trailers	1.6	0.03	0.08	1.71	(0.01)	0.07	1.70
Motorcycles	6.2	0.21	0.14	6.55	(0.06)	0.08	6.49
Tires	2.0	0.04	0.13	2.17	N. E.	0.13	2.17
Child Restraints	3.0	0.04	0.12	3.16	N.E.	0.12	3.16
Total	$65.3	$3.33	$1.72	$70.35	$(9.04)	$(7.32)	61.31

* The safety benefits have not been quantified.

N.E. = Not Estimate, but believed to be fairly small.

Table 18 shows that the annual on-going benefits are higher than the annual on-going costs for light vehicle manufacturers and medium and heavy truck manufacturers. The annual on-going economic benefits and costs are similar for the other manufacturer types and are an overall benefit for the total industry by $7.32 million per year. The benefit accumulates relatively quickly for light vehicles because of the number of vehicles involved in each recall. For the other manufacturers, the annual on-going benefits and costs are very close.

VIII. SMALL BUSINESS IMPACTS

A. Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (5 U.S.C. §601 et seq.) requires agencies to evaluate the potential effects of their proposed and final rules on small businesses, small organizations and small governmental jurisdictions. Business entities are defined as small by standard industry classification for the purposes of receiving Small Business Administration (SBA) assistance. One of the criteria for determining size, as stated in 13 CFR 121.201, is the number of employees in the firm; another criteria is annual receipts. For establishments primarily engaged in manufacturing or assembling automobiles, light and heavy duty trucks, buses, motor homes, new tires, or motor vehicle body manufacturing, the firm must have less than 1,000 employees to be classified as a small business. For establishments manufacturing many of the safety systems for \\\\\which reporting will be required, steering, suspension, brakes, engines and power trains, or electrical system, or other motor vehicle parts not mentioned specifically in this paragraph, the firm must have less than 750 employees to be classified as a small business. For establishments manufacturing truck trailers, motorcycles, child restraints, lighting, motor vehicle seating and interior trim packages, alterers and second-stage manufacturers, or re-tread tires the firm must have less than 500 employees to be classified as a small business.

Information on the number of small businesses manufacturing relevant equipment or vehicles currently sold in the United States, by product category, is presented below.

There are 16 major manufacturers of passenger cars and light trucks, including vans, SUV's and pickups sold in the United States. All are large businesses by the definition of having more than 1000 employees. In addition, NHTSA knows of four small manufacturers[1] of (complete) motor vehicles in the United States accounting for <.1 percent of U.S. production, and in addition, "several hundred" small enterprises that modified or completed unfinished vehicles, of which many were van converters.

NHTSA believes there are 12 manufacturers of medium and heavy trucks sold in the United States. All are large businesses with more than 1000 employees.

NHTSA believes there are 19 bus manufacturers, of which 14 are small manufacturers with less than 1000 employees.

Based on docket comments there are 12 motorcycle or moped manufacturers. We identified two motorcycle manufacturers as small businesses with less than 500 employees.

We estimate that there are 8 large trailer manufacturers and hundreds of small businesses that manufacture trailers (boat trailers, U-haul type trailers, horse trailers, landscape, tree, and yard care equipment trailers, motorcycle/all-terrain vehicle trailers, cars-in tow trailers, and work-performing equipment trailers, e.g., compressors, signs, lights/generators, leaf collecting/mulch, roof and road tar heating).

[1] Panoz, Shelby, Saveen, and Mojler

NHTSA believes there are 10 tire manufacturers, which are all large businesses. The International Tire and Rubber Association website indicates that there are approximately 1,126 retread tire plants in the United States, of which approximately 95 percent are owned/operated by small businesses with less than 500 employees.

Available information on child car seats yields a total of 10 independent enterprises, of which 3 have less than 500 employees and qualify as small businesses.

Gillig Corporation, a manufacturer of heavy duty buses, recommended a review of the definition of "larger" manufacturer to more appropriately reflect the real world situation that almost all vehicles are made by multi-national corporations. Gillig stated that the business and regulatory climate has steadily eliminated small and medium size manufacturers. Gillig stated that the resources required by the NPRM for extended recordkeeping and submittals of records and documents is overly burdensome for smaller manufacturers. Gillig requested that the definition of large manufacturer be redefined to 10,000 vehicles annually. However, these definitions are set by the Small Business Administration.

The National Truck Equipment Association currently has over 1,500 member companies that distribute and manufacture multi-stage produced, work-related trucks, truck bodies and equipment. Most NTEA members are small businesses that will be required to report under the NPRM requirements. NTEA stated that there are thousands of companies that manufacture original equipment for motor vehicles, which could include hoists, winches, buckets, winches, and cranes for work trucks, but which have nothing to do with the operation of the truck as a

motor vehicle. The NTEA suggested that these companies only be required to report in those periods when a reportable incident occurs, relieving the companies from submitting thousands of reports when the report says nothing. NTEA recommended that the reporting requirement could be limited to manufacturers of no more than 10,000 vehicles per year and 2,500 vehicles per model, as contained in NHTSA's temporary exemptions from safety standards (49 CFR Part 555), relieving both NHTSA and the companies from undue burden.

Spartan Motors, Inc. urged that reporting requirements be limited to those that have in excess of 500 million in sales. In addition, Spartan recommended that NHTSA should consider each subsidiary of a corporation, i.e., separate tax paying entities, separate board of directors, etc. be treated separately with regard to the reporting requirements.

Water Equipment Technology Association suggested that the threshold for reporting obligations be set at manufacturers of no more than 10,000 vehicles per year in total and no more than 2,500 vehicles for the current year being exempted, consistent with 49 CFR Part 555.

Utilimaster Corporation, a small-volume manufacturer of walk-in vans (5,000–20,000 vehicles annually), urged that the reporting for manufacturers of specialty vehicles such as itself, be extended to a twice yearly requirements.

The agency has decided to limit the impact on small businesses by excluding from most of the reporting requirements all equipment manufacturers and any vehicle manufacturer that produces fewer than 500 vehicles a year, in a particular category of vehicle, with regard to that category of

vehicle. This exclusion would apply to many of the small businesses discussed above. However, these equipment manufacturers and smaller volume vehicle manufacturers would not be exempt from the requirements to report to us claims submitted against them for death, and to report notices of fatalities that are alleged or proven to have been caused by possible defects in their vehicles. We suspect there will be very few reports per year from manufacturers that produce fewer than 500 vehicles per year. We would also fully exclude registered importers (the vehicles imported by registered importers generally comprise a mixed fleet fabricated by more than a single company).

Although this final rule was preceded by an ANPRM and NPRM, we have received little comment on the impacts the final rule will have on manufacturers who are considered to be "small businesses" by the Small Business Administration (SBA) (e.g., trailer manufacturers who employ no more than 1,000 persons). While we have attempted to reduce the reporting burden on manufacturers who produce a limited number of vehicles a year, choosing 500 vehicles as an appropriate threshold, SBA has commented that there are manufacturers who produce more than 500 vehicles a year but who nevertheless are "small businesses" as defined by the SBA. SBA provided partial information on the numbers of such businesses, but we are as yet unable to determine the total number of "small businesses" in this category. Accordingly, we intend to review the industry to determine the number of such manufacturers who may be "small businesses" but required by the final rule to report in full. This review would be conducted under section 30166(m)(5) of the TREAD Act, which requires periodic review and update for this rule. By mid-2005, we will have completed this review and expect to have received sufficient reports from these "small business" manufacturers to evaluate their assistance in

detecting potential defects in their motor vehicles. We expect that this evaluation, in turn, will allow us to determine whether the threshold of 500 vehicles a year is appropriate or whether it should be modified.

B. Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 (Public Law 104-4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditures by State, local or tribal governments, in the aggregate, or by the private sector, of more than $100 million annually (adjusted annually for inflation with base year of 1995). Adjusting this amount by the implicit gross domestic product price deflator for the year 2000 results in $109 million (106.99/98.11 = 1.09). The assessment may be included in conjunction with other assessments as it is here.

This final rule is not estimated to result in expenditures by State, local or tribal governments of more than $109 million annually. It is not estimated to result in the expenditure by motor vehicle and motor vehicle equipment manufacturers, child seat manufacturers, and tire manufacturers of more than $109 million annually.